

MCCALL SUMMER CHINOOK HATCHERY

**OPERATION AND MAINTENANCE
ANNUAL REPORT**

OCTOBER 1, 2010 TO SEPT. 30, 2011

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FISH HATCHERY MANAGER II**

INTRODUCTION

Operations

McCall Summer Chinook Hatchery was the first hatchery to be built for Idaho under the Lower Snake River Compensation Plan and has been in operation since the fall of 1979. Production goals for the hatchery are 1,000,000 Summer Chinook Salmon smolts to be reared and released into the South Fork of the Salmon River. The mitigation goal is to return 8,000 adult Summer Chinook Salmon above Lower Granite Dam.

The brood year 2010 pre-smolts on station are in good condition at this time. Both outside production ponds are in use, pond 1 is loaded with 535,264 fish, and pond 2 is loaded with 494,625 fish for a total of 1,029,889 fish outside. There are no supplementation fish on station. The reserve fish are marked with ad-clips and ad-clips/coded wire tags (CWT). There are 93,690 Johnson Creek fish to be released by the Nez Perce tribal fishery into Johnson Creek. The eggs from the high BKD tested females were culled. There were approximately 2,000 fish PIT tagged into pond 2 with the remainder of the fish to be PIT tagged in the spring of 2012, just prior to release.

The 2011 summer Chinook spawning run at the South Fork Salmon trap was another good adult summer chinook return. The trap and weir were operational on July 11, 2011. High stream flow prevented trap installation in June. The operation concluded on September 12, 2011, with a total of 4,644 fish trapped over a period 64 days.

There was a total of 1,915,589 green eggs taken from 380

females with an average fecundity of 5,041 eggs per female, and an average eye-up of 93.6%. There were 326,429 eyed eggs transferred to the Sho-Bans for their egg box program this year, and an additional 362,952 eggs from 72 females were shipped to green to the Clearwater Hatchery to start a Summer Chinook program. There were 6 females culled on site this year during spawning. The eggs from 70 females were culled (14 high positive BKD, the rest due to mixing in the incubation trays and culling low positives back to a full hatchery). The integrated broodstock program was continued this year at the South Fork Trap. There were eggs from 71 hatchery or reserve females fertilized with milt pre-collected from an equal number of natural males. The subsequent offspring will be held separately and marked with 100% CWT and no ad-clip. There will be a 250,000 smolt release of integrated fish in the spring of 2013.

Nez Perce fisheries staff held Johnson creek adult salmon on site at the South Fork trap facility. These fish were held with the South Fork fish until first sort when the males were placed in the circular tank to be held through spawning. All of the Johnson creek fish were uniquely marked to distinguish them from the South Fork stock. There were 29 females were spawned, producing 134,511 eyed eggs. The fecundity for these fish was 4,989 eggs per female, eye-up was 93%. There were 2 Johnson Creek females culled due to BKD.

Personnel

There was a change in permanent personnel at the McCall hatchery this past year. Jamie Mitchell is the new assistant manager, starting to work mid-January. There were 8 temporary employees employed during the spring and summer months.

Gene McPherson	FHM II
Jamie Mitchell	Assistant HM
Joel Patterson	Fish Culturist

Miscellaneous

There were three maintenance projects completed this year at McCall hatchery. The first was the light control panel and light fixture replacement project. This project was completed May. The second project, completed in August, was seal coating all of the asphalt on station including walkways. The last project was the remodeling of the main bathrooms in the three residences on station. This project was under contract by the end of September, to be completed by the end of November.

- A. Adult Returns to Hatchery - Species
No adults return directly to McCall Hatchery.
- B. Adults Trapped off Hatchery, Spawned and Eggs Returned to Hatchery

Summer Chinook (BY 11)

Where Trapped:

South Fork Salmon River trap

Dates Trapped:	7/11/11 through 9/07/11
No. Females Trapped:	1,824
No. Males Trapped:	1,239
No. Males and Females Released to Spawn Naturally:	697
No. of Jacks Trapped:	1,559
Mortality of Adult Returns:	350

C. Spawning Record

South Fork Summer Chinook (BY 11)

Dates Spawned	No. of Egg/spawn Day	No. Females & Males used/day	
		Females	Males
8/10	96,715	24	24
8/16	338,476	68	68
8/20	308,506	63	63
8/24	549,625	112	112
8/26	336,480	65	65
8/30	166,754	30	30
9/02	119,033	24	24
Totals	1,915,589	386	386

All of the eggs taken were water hardened for an hour in a 100 ppm iodophor treatment prior to being transported to McCall Hatchery. Individual mesh bags were used for segregation purposes.

Total Number of Eyed Eggs:	1,792,742
Number of Eggs Retained for Rearing:	1,101,370
Number of Eggs Shipped:	689,381
Number of Eggs Culled (BKD):	352,870
Date of Last Spawning:	9/02/11
Date Weir Removed:	9/07/11

D. Rearing to Fry Stage

Summer Chinook (BY 10)

Hatched from Eyed Eggs:	1,109,000
Percent Hatched:	N/A
Percent Mortality to Stocking:	N/A
Total No. of Fry Stocked:	0
Total weight of Fry Stocked:	0
Average No. /Lb. of Fry Stocked:	0
Conversion Rate:	

E. Rearing to Fingerling Stage

	<u>Summer Chinook (BY 10)</u>
No. of Fingerling Produced:	1,029,889
Weight of Fingerling Produced:	27,989
Total No. of Fingerling Stocked:	0
Total Weight of Fingerling Stocked:	0
Percent of Mortality to Stocking:	N/A
Conversion:	1.02

F. Smolts Reared

	<u>Summer Chinook (BY 09)</u>
No. Smolts Produced:	1,069,027
Weight of Smolts Produced:	56,875
Average No./Lb. of Smolts:	18.80
Percent Mortality to Stocking:	2.4*
Conversion Rate:	0.90
*mortality from sac fry.	

G. Food Fed and Weight Gain

Total pounds Food Fed:	51,475
Conversion Rate - All Sizes:	0.09
Total Weight Gain - All Sizes:	56,875

H. Stocking

	<u>Summer Chinook (BY 09)</u>
Total No. of Distribution Trips:	24
No. and Wt. of Fry Stocked BY 09	0 0
No. and Wt. of Fing. Stocked BY 09	0 0
No. and Wt. of Smolts Stocked BY 09	1,069,027 56,875

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Date	Location	Weight	#/Lb	# Released
3/22/11	S.FK. Salmon R.	18,075	18.8	339,710
3/23/11	S.Fk. Salmon R.	17,450	18.8	328,037
3/24/11	S.FK. Salmon R.	19,250	18.8	361,800
3/25/11	S.FK. Salmon R.	2,100	18.8	39,480
Total Released		56,875		1,069,027

In addition to the normal production of the South Fork Summer Chinook program, the hatchery crew also reared 108,895 broodyear 2009 summer Chinook smolts for the Johnson Creek program in cooperation with the Nez Perce tribal fishery program.

These fish averaged 30.5 fish per pound for 3,570 pounds. The

Nez Perce fishery personnel transported and released these fish into Johnson Creek during the period of March 14 - 15, 2011, for the first group and April 5, 2011, for the second group. This was the first year for the Nez Perce Fishery's split-release study providing for approximate equal releases of elastomer and non-elastomer marked fish. Each sub-population was PIT tagged to allow for tracking out migration survival to Lower Granite Dam.